AUTHOR INDEX

Photochemistry and Photobiology

Volume 62

Adam, Waldemar 35, 231
Agarwal, Munna L. 135
Agarwal, Rajesh 855
Agati, Giovanni 711
Albani, J. 30
Alegría, Antonio E. 409
Allen, Cynthia M. 184
Ananthaswamy, Honnavara N. 218
Anderson, Gregory S. 790
Andley, Usha P. 840
Angelini, N. 199
Anilakumar, K. R. 320
Anselmino, Catherine 997
Ariizumi, Kiyoshi 176
Arvigo, Rosita 144
Atherton, Stephen J. 339
Averbeck, Dietrich 997
Axelrod, Daniel 239

Baciou, Laura 271
Bahng, Soon 869
Balick, M. J. 144
Banerjee, D. 575
Banieghbal, E. 1052
Baraldi, Rita 800
Baran, Jan 945
Baron, Marie-Hélène 945
Barra, Mónica 60
Bartoli, C. 151
Basak, Soumen 17
Baumgartner, Reinhold 887
Bazin, Marc 114
Beard, John 1066
Beasley, Donathan G. 1066
Beaton, S. 353
Bech-Thomsen, Niels 773
Bechara, Etelvino J. H. 490, 522
Becker, M. Ines 1041
Beijersbergen van Henegouwen, Gerard M. J. 959
Bellnier, David A. 780, 896
Ben-Hur, Ehud 383, 575, 869, 917
Berg, Leslie J. 923
Berg, Rob J. W. 970
Berger, Maurice 231
Bergstresser, Paul R. 176
Berns, Michael W. 830
Bertazza, Gianpaolo 800
Bertolotti, Sonia G. 65
Bhasikuttan, A. C. 245
Bhattacharyya, Kasturi 17
Bilitz, James M. 790
Black, Homer S. 964
Bogino, Judit 800
Böhm, Britta 82
Böhm, F. 980
Böhm, K. 980
Bono, A. 151
Borkman, Raymond F. 1046
Bottini, Rubén 800
Brandt, Kirsten 1081
Brasseur, Nicole 1058
Brehm, G. 847
Bryden, Wayne A. 557
Bueger, Susan C. de 970

Caceres-Dittmar, Gisela 176
Cadet, Jean 231, 997
Canaan, Alice J. 169
Cardoso, Sergio 1009
Carlyle, Kimberly 402
Cascinelli, N. 151
Cesarini, J.-P. 469
Chalfie, Martin 651
Chambrier, Isabelle 542
Chang, C. K. 875
Chapman, C. F. 416
Charlesworth, P. 980
Chatterjee, Jaidip 641
Chessa de Silber, Juana 1009
Chignell, C. F. 205, 1005
Chimezie, Eleanor 869
Chin, S. 575
Chinsky, Laurent 546
Choi Byong-Seok, ... 44
Chu, Yu 251
Cilento, Giuseppe 522
Claas, F. H. J. 449, 485
Clemente, C. 151
Collins, Bernard 557
Condorelli, G. 155
Cook, Michael J. 542
Cooper, Thomas M. 258
Costanzo, L. L. 155
Courtellemont, Pascal 914
Cozens, F. L. 818
Cracknell, Steven J. 542
Crane, Robert L. 258
Crosby, John C. 326
Cubeddu, R. 199
Cupeta, C. 151

David, Eva 144
De Guidi, G. 155
De Ioannes, Alfredo E. 1041
Deiss-Tolbert, D. M. 263
Del Prato, I. 151
Dillon, James 339, 1005
Dror, R. 342
Drygalla, F. 980
Dubbelman, Tom M. A. R. 757
Dubertret, Louis 114
Duncan, D. D. 94
Dunlap, P. V. 625

Ebata, Katsuyoshi 836
Edwards, Ana M. 1041
El-Ghorr, Ali A. 326
Eldred, Graig E. 1005
Elmets, Craig A. 855
[illegible]inas, Maria V. 65
[illegible]nescu, Mironel 55
Engelborghs, Y. 30
Erlick, Carynelisa 476
Eullaffroy, Philippe 751
Evans-Gowing, Richard 1022

Fagan, Thomas F. 657
Feister, Uwe 736
Feng, Kesheng 813
Ferguson, James 954
Franck, Fabrice 751
Frederick, John E. 476
Freisheim, James H. 71
Fu, Xingxian 692
Fujimoto, Yoshinori 674
Fujiwara, Terufumi 439
Fürst, Sonia 1041
Furukawa, Kanae 809
Fusi, Franco 711

Gaillard, Elizabeth R. 339
Galland, Paul 588
Gantchev, Tsvetan G. 123
Gärtner, Wolfgang 1
Gaullier, Jean-Michel 114
Geacintov, Nicholas E. 917
Geiger, Peter G. 580
Gensler, Helen L. 862
Gerguis, Janette 964
Gerrish, Kevin 862
Gèze, Marc 114
Ghetti, F. 199
Giannini, Alessandro 1081
Gibbs, Neil K. 209, 953
Giddens, Lori D. 1066
Giercksky, Karl-Erik 906
Gies, H. P. 1015
Gilmore, James 862
Gilmour, Jill 209
Girotti, Albert W. 528, 580
Giuffrida, S. 155
Glinski, Jan A. 144
Godar, Dianne E. 108
Godwin, V. 568
Goes, Joaquim I. 703
Gottfried, V. 342
Gottlieb, Paul 869
Gottschalk, L. 847
Greco, William R. 896
Grewe, Rolf 736
Grob, Peter M. 144

AUTHOR INDEX

Photochemistry and Photobiology

Volume 62

Adam, Waldemar 35, 231
Agarwal, Munna L. 135
Agarwal, Rajesh 855
Agati, Giovanni 711
Albani, J. 30
Alegría, Antonio E. 409
Allen, Cynthia M. 184
Ananthaswamy, Honnavara N. 218
Anderson, Gregory S. 790
Andley, Usha P. 840
Angelini, N. 199
Anilakumar, K. R. 320
Anselmino, Catherine 997
Ariizumi, Kiyoshi 176
Arvigo, Rosita 144
Atherton, Stephen J. 339
Averbeck, Dietrich 997
Axelrod, Daniel 239

Baciou, Laura 271
Bahng, Soon 869
Balick, M. J. 144
Banerjee, D. 575
Banieghbal, E. 1052
Baraldi, Rita 800
Baran, Jan 945
Baron, Marie-Hélène 945
Barra, Mónica 60
Bartoli, C. 151
Basak, Soumen 17
Baumgartner, Reinhold 887
Bazin, Marc 114
Beard, John 1066
Beasley, Donathan G. 1066
Beaton, S. 353
Bech-Thomsen, Niels 773
Bechara, Etelvino J. H. 490, 522
Becker, M. Ines 1041
Beijersbergen van Henegouwen, Gerard M. J. 959
Bellnier, David A. 780, 896
Ben-Hur, Ehud 383, 575, 869, 917
Berg, Leslie J. 923
Berg, Rob J. W. 970
Berger, Maurice 231
Bergstresser, Paul R. 176
Berns, Michael W. 830
Bertazza, Gianpaolo 800
Bertolotti, Sonia G. 65
Bhasikuttan, A. C. 245
Bhattacharyya, Kasturi 17
Bilitz, James M. 790
Black, Homer S. 964
Bogino, Judit 800
Böhm, Britta 82
Böhm, F. 980
Böhm, K. 980
Bono, A. 151
Borkman, Raymond F. 1046
Bottini, Rubén 800
Brandt, Kirsten 1081
Brasseur, Nicole 1058
Brehm, G. 847
Bryden, Wayne A. 557
Bueger, Susan C. de 970

Caceres-Dittmar, Gisela 176
Cadet, Jean 231, 997
Canaan, Alice J. 169
Cardoso, Sergio 1009
Carlyle, Kimberly 402
Cascinelli, N. 151
Cesarini, J.-P. 469
Chalfie, Martin 651
Chambrier, Isabelle 542
Chang, C. K. 875
Chapman, C. F. 416
Charlesworth, P. 980
Chatterjee, Jaidip 641
Chessa de Silber, Juana 1009
Chignell, C. F. 205, 1005
Chimezie, Eleanor 869
Chin, S. 575
Chinsky, Laurent 546
Choi Byong-Seok, ... 44
Chu, Yu 251
Cilento, Giuseppe 522
Claas, F. H. J. 449, 485
Clemente, C. 151
Collins, Bernard 557
Condorelli, G. 155
Cook, Michael J. 542
Cooper, Thomas M. 258
Costanzo, L. L. 155
Courtellemont, Pascal 914
Cozens, F. L. 818
Cracknell, Steven J. 542
Crane, Robert L. 258
Crosby, John C. 326
Cubeddu, R. 199
Cupeta, C. 151

David, Eva 144
De Guidi, G. 155
De Ioannes, Alfredo E. 1041
Deiss-Tolbert, D. M. 263
Del Prato, I. 151
Dillon, James 339, 1005
Dror, R. 342
Drygalla, F. 980
Dubbelman, Tom M. A. R. 757
Dubertret, Louis 114
Duncan, D. D. 94
Dunlap, P. V. 625

Ebata, Katsuyoshi 836
Edwards, Ana M. 1041
El-Ghorr, Ali A. 326
Eldred, Graig E. 1005
Elmets, Craig A. 855
[illegible]inas, Maria V. 65
[illegible]nescu, Mironel 55
Engelborghs, Y. 30
Erlick, Carynelisa 476
Eullaffroy, Philippe 751
Evans-Gowing, Richard 1022

Fagan, Thomas F. 657
Feister, Uwe 736
Feng, Kesheng 813
Ferguson, James 954
Franck, Fabrice 751
Frederick, John E. 476
Freisheim, James H. 71
Fu, Xingxian 692
Fujimoto, Yoshinori 674
Fujiwara, Terufumi 439
Fürst, Sonia 1041
Furukawa, Kanae 809
Fusi, Franco 711

Gaillard, Elizabeth R. 339
Galland, Paul 588
Gantchev, Tsvetan G. 123
Gärtner, Wolfgang 1
Gaullier, Jean-Michel 114
Geacintov, Nicholas E. 917
Geiger, Peter G. 580
Gensler, Helen L. 862
Gerguis, Janette 964
Gerrish, Kevin 862
Gèze, Marc 114
Ghetti, F. 199
Giannini, Alessandro 1081
Gibbs, Neil K. 209, 953
Giddens, Lori D. 1066
Giercksky, Karl-Erik 906
Gies, H. P. 1015
Gilmore, James 862
Gilmour, Jill 209
Girotti, Albert W. 528, 580
Giuffrida, S. 155
Glinski, Jan A. 144
Godar, Dianne E. 108
Godwin, V. 568
Goes, Joaquim I. 703
Gottfried, V. 342
Gottlieb, Paul 869
Gottschalk, L. 847
Greco, William R. 896
Grewe, Rolf 736
Grob, Peter M. 144

Gruijl, Frank R. de 970
Gryczynski, Ignacy 426, 804
Guevara, Norberto 409
Guikers, Kees 970
Gust, Devens 1009

Häder, D.-P. 1027
Hagen, Christoph 514
Halpern, Arthur M. 686
Hama, Takeo 703
Hamilton, Tiffani 444
Handa, Nobuhiko 703
Hansen, Gordon 144
Harrison, G. I. 976
Hastings, J. Woodland 599
Hawk, J. L. M. 976
Henderson, Barbara W. 780, 875, 896
Heyerdahl, Helen 906
Hideg, Éva 949
Hofstädter, Ferdinand 887
Holmes, Justin D. 1022
Horowitz, Bernard 383, 575, 869, 917
Horton, Peter 514
Hosseini, Pamela K. 633
Hudson, J. G. 568
Hurks, H. M. H. 449, 485
Hurtubise, Robert J. 251

Ilczyszyn, Marek 945
Imahori, Hiroshi 1009
Inoue, Yorinao 514
Inouye, Satoshi 657
Irwin, C. J. 348
Ishii, Takasada 509
Izumida, Rie 809

Jain, Ashok K. 169
Jansén, C. T. 769
Jay, Daniel G. 923
Johnson, Patricia G. 780, 896
Jokela, Kari 101, 769
Jokiel, K. 980
Jordan, T. W. 550

Kaidbey, K. H. 348
Kakuno, Tomisaburo 502
Kanofsky, Jeffrey R. 692
Kantor, G. J. 263
Kashiwasake-Jibu, Masaki 836
Kasperbauer, M. J. 940
Katiyar, Santosh K. 855
Kato, Yoji 190
Kenney, Malcolm E. 575, 869
Kessel, David 875
Khanum, Farhath 320
Kido, Naofumi 674
Kim, Jong-Ki 44
Kimel, S. 342
Kirkpatrick, S. J. 94
Kitano, Hiromi 680, 809
Kliger, D. S. 356
Knüchel, Ruth 887
König, Karsten 830
Korbelik, Mladen 162
Korytowski, Witold 580
Koyama, Yasushi 502
Krammer, B. 1052
Krieg, Marianne 790
Kriegmair, Martin 887
Krosl, Gorazd 162
Kuki, Michitaka 502
Kumamaru, Takahiro 439

Ladan, H. 342
Lagerberg, Johan W. M. 757
Lakowicz, Joseph R. 426, 804
Lapko, Veniamin N. 194
Lappin, Michael B. 326
Lavker, R. M. 348
Learn, Douglas B. 1066
Ledbetter, John W., Jr. 71
Lee, L. K. 882
Lenci, F. 199
Lenz, P. 333
Leonard, Scott F. 144
Lercari, Bartolomeo 711, 1081
Leszczynski, Kirsti 101, 769
Lettinga, P. 279, 290, 299
Leupold, Dieter 984
Levine, Y. K. 279, 290, 299
Levy, Julia G. 169
Lewis, J. W. 356
Lewis, Karina 1058
Li, Hai-Li 444
Li, L. 51
Li, Xiao-Yuan 361
Li, Yuzhuo 813
Liao, Joseph C. 923
Lin, Fubao 528
Lin, Su 1009
Lindqvist, Lars 55
Linetsky, Mikhail 87, 454
Liu, Robert S. H. 361
Liu, Y. 416
Liu, Yagang 830
Liu, Yang 433
Losi, A. 199
Lucas, Anne D. 108
Luna, Virginia 800
Lydataki, Stella 535

MacLennan, R. 1015
Maeda, Yasushi 680, 809
Mager, Humphrey I. X. 607, 615
Mah, T. L. 356
Mahdavi-Anary, Farah 813
Maisch, Manfred 1076
Malik, Z. 342
Marchesini, R. 151
Margolis-Nunno, Henrietta 917
Marwan, Wolfgang 930
Masuko, Masayuki 836
Matich, A. J. 550
Matsugo, Seiichi 680, 809
Matsuoka, Tatsuomi 190
Mayes, Denise A. 542
Mazière, Jean-Claude 114
Mazzinghi, Piero 711
McLaughlin, Jennifer 1046
McPherson, R. A. 353
Meighen, Edward A. 641
Menagé, H. du P. 976
Menter, Julian M. 402
Meunier, Isabelle 764
Mielke, Karsten 35
Milan, T. 769
Miskovsky, Pavol 546
Mitchell, A. C. 24
Mittal, J. P. 245
Moan, Johan 906
Mohtat, N. 818
Mommaas, A. M. 449, 485
Moore, Ana L. 1009
Moore, Cyril L. 402
Moore, J. V. 882
Moore, Thomas A. 1009
Morgan, C. G. 24
Morlière, Patrice 114
Msika, P. 469
Mukhtar, Hasan 855

Nakashima, Kenichi 674
Nantes, Iseli L. 522
Naruse, Mitsuru 502
Nataraj, Arun J. 218
Natarajan, Lalgudi V. 258
Nealson, Kenneth H. 633
Nesland, Jahn M. 906
Neumann, Miguel G. 65
Nitzan, L. 342
Nohl, Hans 433
Norval, Mary 209, 326
Noss, Lori 1009
Novoderezhkin, Vladimir I. 1035

Obochi, Modestus O. K. 169
Ohba, Nobuyoshi 309
Ohmiya, Yoshihiro 309, 657
Ohtani, Hiroyuki 836
Okotie-Eboh, Goodluck 964
Olesen, Paul R. 454
Ormrod, D. P. 719, 727
Ortwerth, B. J. 87, 454
Oseroff, Allan R. 780
Ottolenghi, M. 356
Ouellet, René 1058
Out-Luiting, C. 449, 485
Ozaki, Yukihiro 496, 509

Paardekooper, Michel 561
Paillous, N. 469
Paliyath, G. 727
Pallikaris, Ioannis G. 535
Pamphilon, D. H. 568
Pandey, Ravindra K. 764
Pantelides, M. L. 882
Panti, Eligio 144
Parsons, John C. 896
Partch, Richard E. 813
Pascal, Andrew A. 514
Patel, Dinshaw 44
Patterson, L. K. 51
Paulsen, Harald 367
Pav, Susan 144
Péguet-Navarro, Josette 914
Peng, Qian 906
Petersen, Marta 444
Pfleiderer, Wolfgang 71
Piart-Goypiron, Annie 945

Piazena, H. 1027
Pifferi, A. 199
Pignoli, E. 151
Pitner, Phillip 144
Poehler, Theodore O. 557
Popovic, Radovan 751
Potten, C. S. 976
Potter, William R. 764, 896, 1058
Preece, A. W. 568
Prenzel, C.-J. 847
Previtali, Carlos M. 65
Pullens, R. 568

Rama Rao, K. V. S. 245
Ramachandran, B. R. 686
Rao, Mulpuri V. 719, 727
Ratajczak, Henryk 945
Ratovelomanana, Nicole 945
Rattis, Frédérique-Marie 914
Razjivin, Andrei P. 1035
Redziniak, Gérard 914
Reszka, Krzysztof 1005
Richardson, David J. 1022
Richter, Anna M. 169
Roberts, Joan E. 339
Roberts, Lee K. 1066
Robinson, Richard 917
Routaboul, C. 469
Roy, C. R. 1015
Rüdiger, Wolfhart 1076
Russell, David A. 542, 1022

Sá e Melo, Teresa 114
Sagara, Yasuhiro 190
Saha-Möller, Chantu R. 231
Sakai, Hiroyuki 439
Salisbury Eye Evaluation Team 94
Salvetat, Richard 751
Sandhu, S. S. 24
Sandorfy, Camille 945
Santhanam, K. 320
Santus, René 114
Sapre, A. V. 245
Sato, Hidetoshi 509
Scaiano, J. C. 60, 818
Scheer, H. 847
Schmidt, Werner 745
Schmitt, Daniel 914
Schneckenburger, Herbert 745
Schneider, S. 847
Schneider, W. 94
Schönberger, André 231
Schulz, Michael 1076
Schütz, Andreas 82
Sebban, Pierre 271
Seely, Gilbert R. 1009
Senger, Horst 588
Sereno, Leonides 1009
Serpentini, C.-L. 469
Sgarbossa, A. 199
Shen, Li-Gang 869
Sheves, M. 356
Sichirollo, A. E. 151
Sieber, Fritz 790
Sik, R. H. 205
Silva, Eduardo 1041
Simpson, Jeannette 862
Singh, D. P. 314
Sitnik, Theresa M. 896
Smith, Kevin M. 764
Smith, Peter R. 1022
Snellman, E. 769
Sodeau, John R. 1022
Sonek, Greg J. 416, 830
Song, Pill-Soon 194
Sortino, S. 155
Spalding, Edgar P. 934
Stanfield, Joseph W. 1066
Starostzik, Christine 930
Steen, Harald B. 906
Steinbach, Pia 887
Stiel, Holger 1076
Stone, Morley O. 258
Stout, Andrea L. 239
Subhash, N. 711
Sumlin, Adam B. 764
Sureau, Franck 546
Szmacinski, Henryk 804

Tachibana, Taro 496
Taguchi, Satoru 703
Takashima, Akira 176
Takayanagi, Miyuki 190
Tanew-Iliitschew, Adrian 463
Tapia, Felix J. 176
Taroni, P. 199
Tatman, Dereck 1009
Teuchner, Klaus 1076
Thornby, John I. 964
Tilbury, R. N. 550
Tilley, L. 353
Tillmanns, Sascha 588
Toh, Hiroyuki 309, 657
Tomatis, S. 151
Toomey, S. 1015
Towner, Paul 1
Traul, Donald L. 790
Trent, Jonathan C., II 218
Trofimov, Alexei V. 35
Tromberg, Bruce J. 416, 830
Truscott, T. G. 980
Tsilimbaris, Miltiadis K. 535
Tsuji, Frederick I. 309, 657
Tsunooka, Masahiro 496
Tu, Shiao-Chun 607, 615
Turpin, Pierre-Yves 546
Tyrrell, Rex M. 463

Überriegler, K. P. 1052
Uehara, Kaku 496, 509
Ulitzur, S. 625
Ullrich, Stephen E. 389
Urban, Julie I. 964

Van den Broek, Peter J. A. 561
Van Gompel, Angeline E. 561
van der Leun, Jan C. 970
van Ginkel, G. 279, 290, 299
van Leengoed, Henricus 780
van Lier, Johan E. 123, 184, 1058
van Vloten, Willem A. 970
van Weelden, Huib 970
van Zandvoort, M. A. M. J. 279, 290, 299
VanDerWal, Jaap 757
VanSteveninck, John 561, 757
Varnes, Marie E. 135
Vasil'ev, Rostislav F. 35
Vass, Imre 949
Vaughan, Lurine 780, 896
Vecli, A. 199
Vercesi, Aníbal E. 522
Veres, D. A. 348
Verma, Kavita 314
Vermeer, B. J. 449, 485
Viappiani, C. 199
Vile, Glenn F. 463
Visuri, Reijo 101, 769
Viviani, Vadim R. 490
Vos, R. 30
Vries, Henk de 959

Wang, Ren-Hong 1005
Warloe, Trond 906
Warren, Thomas C. 144
Watanabe, Yoshiya 190
Watson, M. 1015
Weber, Jennifer G. 840
Weber, Joseph M. 184
Weber, Susanne 82
Weingandt, Helmut 887
West, K. J. 94
West, S. K. 94
Whitaker, James 896
Whitehurst, C. 882
Wilkinson, R. E. 940
Willaert, K. 30
Williamson, George D. 402
Willis, Isaac 402
Wilson, Thérèse 601
Wolff, Thomas 82
Wood, Keith V. 662
Woodburn, Kathryn 875
Wróbel, D. 279, 290, 299
Wulf, Hans Christian 773

Xu, Shan 176
Xue, Liang-yan 135

Yamamoto, Takahiro 680, 809
Yianni, Y. P. 24
Ylianttila, Lasse 101
Young, A. R. 976

Zayas, Luis 409
Zhao, K.-H. 847
Zine, Hassan 945
Zuk, M. M. 575

SUBJECT INDEX

Photochemistry and Photobiology

Volume 62

abscisic acid 800
acid-base reaction 439
α_1-acid glycoprotein 30
action spectra
  lens epithelial cells 840
  chronic actinic dermatitis 976
  immunosuppression 449
  silicon naphthalocyanine 1058
adamantanone 35
adhesion molecules 209
Aequoria victoria 651
aequorin 657
age-related macular degeneration 1005
aggregates, chlorophyll 279, 290
aging 399
albumin 790
allostimulatory function 914
aluminum phthalocyanine 757
amino acid composition 703
5-aminolevulenic acid 114, 780, 887, 906, 1052
ammonium sulfate extraction 194
Anacystis nidulans 314
anisotropy decay 279
anthocyanin 1081
antigen presentation 176
apoptosis
  p53 gene mutations 218
  protoporphyrin IX 1052
  UV-induced 108
Arabidopsis thaliana
  UVB and ozone 719, 727
  electrophysiological responses 934
arctic ozone depletion 101
ascorbate-glutathione cycle 719
ascorbic acid 454
auxin 800
Avena 194
azides 813
azobenzene 24

β-crystallin 840
β-lactoglobulin-retinoid complexes 361
bacterial antenna 984
bacterial bioluminescence 615
bacterial reaction centers 271, 984
bacteriochlorophyll 1035
bacteriochlorophyll *c* 509
bacteriochlorophyll *c* aggregates 496
Balb/c mice 1058
band 3 protein 353
basal cell carcinoma 906
bathorhodopsin 356
benzo(a)pyrene 251
benzophenone 60
benzoporphyrin derivative 169, 764
bilayer phase transition 416
bilirubin 980
biodistribution 1058
biogenesis 367
bioluminescence
  bacterial 615
  beetle 662
  biochemistry 615
  biotechnological applications 641
  Brazilian butterflies 490
  Ca^{+2}-binding proteins 657
  chemical mechanisms 601, 607, 662
  coelenterates 651
  green fluorescent protein 651
  Japanese butterflies 309
  luciferase gene 309
  lux genes 641
  molecular evolution 599, 657, 662
  regulation 625, 633
  soil bacteria 633
  spectral distribution 490
biophoton emission 550
biopterin 71
biphotonic ionization 245
Blepharisma japonicum 190, 199
blood glucose 320
blood pH 320
blood plasma chemiluminescence 550
blood sterilization
  psoralen 917
  review 383
  sulphophthalocyanines 184
blue absorbing pigment 800
blue light effect 930, 940
blue-green fluorescence 711
bone marrow 568
bone marrow transplantation 790
blue-shifted intermediate 356
buckminsterfullerene 1009

cadmium sulfide crystallites 1022
calcium fluorophore 804
carcinogenesis
  dietary fat 964
  review 218
  UVA 773
carotenoids
  β carotene 1009
  quenchers 692
  reaction centers 502
CARS 847
catalase 123
cataract
  ascorbic acid glycation 454
  dosimeters 94
  porphyrin excited states 339
  UVA 87, 454
cationic sensitizers 875
cDNA cloning 1

cell cycle 218
charge recombination 271
charge separation 745
chemiluminescence
  adamantanone 35
  blood plasma 550
  heme systems 433
  mechanisms 601
  mitochondria 522
  neutralization 439
chloroaluminum phthalocyanine 561
chlorophyll *a* 279, 290, 299
chlorophyll *a/b* binding protein 367
chlorophyll fluorescence 514, 711
chlorophyllide 751
chlorosome 496, 509
chlorophyll *a/b* 367
CHO cells 757
cholesterol hydroperoxides 580
chronic actinic dermatitis 976
chronic UVR exposure 326
α-chymotrypsin 809
circular dichroism
  light-harvesting antenna 1035
  somatostatin 17
cis-urocanic acid 914
clytin 657
coelenterates 651
collagen 402
collagenase 444
colored mulch 940
confocal microscopy 887
contact hypersensitivity
  chronic low dose UVB 326
  green tea polyphenols 855
  review 209
cremophor EL 575, 1058
crystal violet 245
α-crystallin 1046
cycloadduct 997
cyclobutyl pyrimidine dimers
  genomic regions 263
  human skin 970
  photosensitized 469
  structures 44
cyclodextrin complexes 60, 251
cytochrome 522
cytokine receptors 144
cytokines 209, 389
cytoskeletal proteins 239
deaggregation 674
dehydroazepine 813
delayed fluorescence 745
delayed hypersensitivity 209
depolarization 934
diffuse reflectance 60
dihydrofolate reductase 71
5,6-dihydroisorhodopsin 356
5,6-dihydroxyindole-2-carboxylic acid 469
7,8-dihydro-8-oxoguanine 231
dioxetane
  adamantanone 35
  chemiluminescence 601
  DNA oxidation 231
diphenylacetaldehyde oxidation 522
distribution analysis 60
dityrosine 1041
DNA adduct 251
DNA cleavage 155, 469
DNA damage
  apoptosis 108
  immunosuppression 449
  photosensitized 469
DNA degradation 108
DNA photoproducts 44
DNA repair 970
dosimeter 94
dynamic photoinhibition 514

edema 1066
elastin 348
Elateridae 490
electromagnetic fields 205, 818
electron transfer
  dyad 1009
  review 984
  vesicles 51
EMT-6 tumor 1058
energy dissipation 367
energy transfer
  adamantanone 35
  chlorophyll 279, 290
epidermal dendritic cells 176
EPR 557, 1005
erythrocytes
  band 3 353
  blood sterilization 383
  magnetic field effects 205
  metallophthalocyanines 123
ESR 82, 433
excimer 836
excited electronic states 984
excited state energies 35
excited state kinetics 55
exciton interactions 1035

far red light 930, 940
fatty acid reductase 641
fatty acids 940
fatty alcohols 940
ferric protoheme 433
ferritin 528
fibroblasts 114
firefly 490
firefly luciferase 309
flavins 588, 1081
flavonoid biosynthesis 719
flow cytometry
  apoptosis 108
  DNA dimers 970
  protoporphyrin IX 887
fluorescence
  alkane 426
  cellular 887
  chlorophyll 279
  collagen 402
  diagnosis 887
  dipolarization 299
  lifetimes 30
  microscopy 804
  octadecylrhodamine B 674
  photometry 906
  polarization 674
  probes 416

protoporphyrin IX 114
pyrene probes 836
quenching 30
somatostatin 17
spectra 686
spectroscopy 199
subcellular 546
three-photon excitation 804
two-photon excitation 426, 804
forest decline 745
FRAP 239
free radicals
catalase 123
cholesterol 580
heme systems 433
lipofuscin 1005
magnetic fields 205, 818
melanin 557
scavenging 719
suprofen 155
fs-spectroscopy 984
FT-IR 496, 509
FT-Raman 509
fullerene 1009

G-protein coupled receptor 1
gene characterization 1
gibberellins 800
gilvocarcin M 409
gilvocarcin V 409
glycation 454
Gram positive/negative bacteria 342
green bacteria 496
green fluorescent protein 651
green light phototherapy 980
green tea polyphenols 855

H^+-ATPase 934
heat shock 930
helix-to-coil transition 258
hematoporphyrin derivative
band 3 protein 353
hematological parameters 320
infrared light 333
rhodamine 123, 757
heme proteins 433
herbicide 271
high light irradiance 314
histamine 209
Hotaria parvula 309
human exposure 101, 1015
human Langerhans cells 914
human lenses 339
human retina 1005
human skin 348
hydrated electron 245
hydrogen peroxide
antigen presentation 87
ascorbic acid 454
human lens 87
hydrogen transfer 71
hydroxyl radical 809
hyperbilirubinemia 980
hypericin 199, 546
hyperpolarization 934
hypocotyls 1081

immunosuppression
action spectra 449
chronic UVB 326
cytokines 389
green tea polyphenols 389
irradiance-dependence 485
review 209, 389
spectral dependence 1066
urocanic acid 209
immunotoxicity 959
Indo-1 804
indole-2-carboxylic acid 469
insect visual pigment 1
intensity-dependent transmission 1076
interconversion 496
interferon-gamma 862
intracellular localization 887
iron 439, 528, 580
irradiance dependence 485
isomerization 502
α-isorhodopsin 356

Jerlov water type 1027

K^+ channel 934
K562 leukemic cells 123
ketone triplets 231
ketoprofen 205
Klebsiella aerogenes 1022

L929 cells 757
Lampyridae 490
Langerhans cells
chronic UVB 326
irradiance-dependence 485
human 914
hydrogen peroxide 176
laser inactivation 923
laser-induced leaf fluorescence 711
laser tweezers 830
lateral diffusion 239
laurdan 416
leaf waxes 940
lens
epithelial cells 840
human 87, 339
hydrogen peroxide 87
protein 1046
UV damage 454
leukemia cells 528, 790
light damage 1005
light dosimetry 882
light quality 800
light-harvesting antenna 1035
light-harvesting complexes 367, 514
lipid exchange 24
lipid peroxidation 314, 580
lipofuscin 114, 1005
liposomes
electron transfer 51
hypericin 199
photochromic lipid 24
singlet oxygen 692
lowlight imaging 1052
luciferase 490
beetle 662
chemical mechanisms 607

DNA sequence 309
lux genes 641
regulation 625
luciferin 662
lumazines 588
luminescence autoinduction 625
luminous bacterium 633
lumirhodopsin 356
LuxR protein 625
lymphocytes 568
lymphocytes, mitogen-stimulated 169
lysosomes 114

lysozyme 348, 680

macular degeneration 94
magnetic field effects 205, 818
malachite green 923
malignant cells 162
marine phytoplankter 703
MECLR 449
melanin
free radicals 557
photosensitization 469
reflectance imaging 151
UVA 773
melanoma 151
membrane damage 108, 463
membrane receptors 144
merocyanine 540, 528, 790
5-methoxypsoralen 997
metallophthalocyanines 123
methylene blue 55
metmyoglobin 433
micelles
magnetic field effects 818
photo-cations 82
somatostatin 17
microbeam 830
microspectrofluorometry 114
microspectrofluorometry, NADH 830
minimal erythema dose 769, 970
mitochondria 114
mitochondrial damage 522
mitrocromin 657
mixed epidermal cell lymphocyte reaction 485
mixed lymphocyte culture 568
MLR 449
molecular chaperone 1046
molecular complexes 55
mouse fibrosarcoma 162
multiphoton processes 333
mutation 218

naphthalocyanine 1058
natural killer cells 209
NCTC 2544 keratinocytes 114
neovascularization 535
7-nitrobenz-2-oxa-1,3-diozol-4-yl 416
NF-κB 463
nifedipine 959
nigericin 135
nitrene 813
nitrocellulose films 279, 290, 299
nitrogen limitation 703
nitroso derivative 959
non-linear absorption 333
non-linear spectroscopy 984
nucleic acid hybridization 836

obelin 657
octa-alkyl zinc phthalocyanine 542
octadecylrhodamine B 674
OKM5+ cells 485
optical thermometer 416
organic vapor effect 496
orientation factor 279
orosomucoid 30
oxidative stress 463
oxygen free radicals
human lens 87, 454
cyanobacteria 314
gilvocarcin 409
ozone 719, 727
ozone depletion 101, 476

p-aminobenzoic acid 686

p53 218
PABA 686
parasites 869
peroxidation 433
phase fluorometry 30
Phengodidae 490
pheophorbide A 144
pheophytin a 290, 299
(6-4) photoadduct 44
phospholipids 51
phosphorescence spectrum 686
photo-cations 82
photo-Fenton reaction 809, 680
photo-oxidation 680
photoacoustic calorimetry 199
photoaffinity labeling 813
photoaging 444
photoallergy 959
photobleaching 239
photochemotherapy 333
photochrome 1081
photochromic polypeptide 258
photochromism 24, 258
photocyanobilin 847
photodegradation 959
photodimer 44, 239
photodynamic inactivation 528, 757, 869
photodynamic therapy
benzoporphyrin derivative 169, 764
cationic porphyrin 875
light penetration 882
naphthalocyanine 1058
nigericin 135
octa-alkyl zinc phthalocyanine 542
Photofrin® 162
protoporphyrin IX 887, 1052
sulfophthalocyanines 184
vascular damage 896
protoporphyrin IX 114, 780, 887, 1052
Photofrin® 162
photohemolysis 184, 205
photoimmunology 964
photoimmunology, review 389
photointermediates 356
photoionization 82, 245

photoisomerisation
photochromic lipid 24
retinal 361
phytochrome 1076
photolabile chromophores 402
photometry 94
photomorphogenesis 940
photomovements 199
photon protection 514
photooxidative damage 314
photoprotection 502, 1022
photoproteins 657
photoreceptor 190, 199
photoreduction 65
photoresistance 528
Photorhabdus luminescens 633
photosensitization
benzoporphyrin derivative 169, 764
blood sterilization 383
cationic porphyrin 875
chloroaluminum phthalocyanine 561
cholesterol hydroperoxide 580
dihyrdofolate reductase 71
eumelanin 469
fluorquinolone 954
gilvocarcins 409
metallophthalocyanines 123
pheophorbide *a* 144
phthalocyanine 535, 542, 575
porphines 342
protein synthesis 561
protoporphyrin IX 114
sulfophthalocyanines 184
suprofen 155
photostationary state 361
photosynthesis
bacterial reaction centers 271
circular dichroism 1035
delayed luminescence 745
electrophysiological responses 934
quinone electron acceptors 271
spirilloxanthin 502
temperature dependence 751
thermoluminescence z-band 514
Photosystem I 949
photothrombosis 535
phototoxicity 108, 954
phototropism 588
phthalocyanine
V79 cells 135
virus inactivation 184, 575
aggregation 542
photodecomposition 542
chloraluminum sulfonated 535
blood sterilization 869
phycobilisome 847
Phycomyces blakesleeanus 588
Physarum polycephalum 930
physocyanin 847
phytochrome
purification 194
Prunus cerasus 800
epicuticular wax 940
excited state 1076
phytoplankter 703
phytoplankton 1027
picosecond spectroscopy 55
pigmentation 773
pigmented cutaneous lesions 151
plasma 383
plasma proteins 575
platelets 383, 917
polyene 361
polynucleotides 55
polystyrene latex 674
polysulfone film 1015
polyvinyl alcohol 279, 290
porphines 342
porphyrin excited states 339
porphyrin fluorescence 342, 906
prostaglandin E_2 840
programmed cell death 108
prostatic neoplasm 882
protein kinase C 444
protochlorophyllide 751
proton motive force 745
protoporphyrin IX
cellular fluorescence 887
keratinocytes 114
murine tumor 780
subcellular damage 1052
Prunus cerasus 800
psoralens 917
pterins 588
purple bacteria 1035
PUVA 917
pyrene 51, 836
Pyrocoelia miyako 309
pyropheophorbide A 144

quinone 190, 271

radiative rate constant 686
radical pairs 818
Raman spectroscopy 502
reaction center
circular dichroism 1035
quinone electron acceptor 271
spirilloxanthin 502
red blood cells
hematoporphyrin derivative 320
phthalocyanine 575
sterilization 869
red light 940
reflectance spectroscopy 151
reflected light 940
remote sensing 1027
Renilla reniformis 651
reporter gene 651
retinal 361, 945
retinal chromophore 1
retinylidene imine 945
reverse micelles 17
rhodamine B 674
rhodamine 123 757
Rhodobacter sphaeroides 984
Rhodopseudomonas acidophila 984
Rhodopseudomonas viridis 271
rhodopsin 1, 356
Rhodospirillum rubrum S1 502
riboflavin 1041
Rubisco protein 727

safranine T 65

salicylate 790
Salvia splendens 711
Schiff base 945
SCID mice 162
self-quenching 674
semiempirical calculations (AM1) 35
Shibata shifts 751
signal transduction 930
singlet energy transfer 30
singlet oxygen
  cholesterol hydroperoxides 580
  gilvocarcins 409
  liposomes 692
  metallophthalocyanine 123
  Photosystem I 949
  suprofen 155
SKhl mice 1058
skin
  cancer 218
  collagenase 444
  edema 1066
  immunosuppression 1066
  melanin 557
  naphthalocyanine 1058
  type 769
solar simulated radiation 1058
solar UVR 1015
solar wavelengths 402
solid state luminescence 251
Solutol HS 15 1058
somatostatin 17
spectral curve fitting 711
spectral reflection of solar irradiance 736
spin probes 82
spin trapping 123, 409
spirilloxanthin 502
spiropyyran 258
spleen cells 162
sporulation 930
state transitions 367
Stentor coeruleus 199
step-up photophobic response 190
Stern-Volmer constants 35
stress protein induction 135
succinylated poly(L-lysine) 258
sunburn cell
  apoptosis 108
  chronic UVB 326
  UVA 348
sunlight, erythemal 476
superoxide
  gilvocarcin 409
  human lens 87
  retinal lipofuscin 1005
superoxide dismutase 123, 314
suprofen 155
surface albedo 736

T cell receptor 923
T lymphocytes 964
T24 cells 757
thermoluminescence 514
three-photon fluorescence excitation 804
thylakoid membrane 514
thylakoids 949
thymidine 997
tin ethyl etiopurpurin 882
tissue blood perfusion 896
2-*p*-toluidinylnaphthalene-6-sulfonate 30
total internal reflection 239
transfer rates 279
transformed lung fibroblasts 1052
transition dipole moment 299
triphenylmethane dye 245
triplet benzophenone 522
Triton X-100 674
Trypanosoma cruzi 869
tryptophan 30
tumor associated macrophages 162
tumor rejection 862
tumorigenesis 964
two-photon fluorescence excitation
  calcium imaging 804
  methyl cyclohexane 426
  optical trap 830
  photosensitizers 333
tyrosine 1041

ultrafast energy transfer 984
ultraviolet radiation, measurement 476
ultraweak luminescence 550
urocanic acid 209, 326
UV radiation
  edema 1066
  Finland 101
  human lens 87
  immunosuppression 209, 389, 449, 1066
  melanin 557
  p53 mutations 218
  photocarcinogenesis 218
  review 209, 218
  skin types 769
  spectral albedo measurements 736
  stress 711
  urocanic acid 209
ultraviolet A radiation 1022
  apoptosis 108
  autofluorescence 830
  bacterial photoprotection 1022
  cancer 773
  collagenase induction 444
  erythema 348
  lymphocytes 568
  melanin 773
  NF-κB activation 463
  nifedipine 959
  psoralen 917
UVA1 917
UV/blue-light receptor 588
UVB radiation
  apoptosis 108
  Arabidopsis thaliana 727
  bone marrow cells 568
  dosimetry 94
  flavenoid biosynthesis 719
  immunosuppression 485
  interferon-gamma 862
  lymphocytes 568
  phytoplankton 703
  tumor rejection 862
UVC radiation 108, 568

Vaccinia virus 184
vascular damage 896

vertical distribution 1027
viologen 51
virus photoinactivation
  psoralen 917
  review 383
  silicon phthalocyanine 575
  sulfophthalocyanines 184
visible radiation dosimetry 94
visual transduction 1

wavelength tuning 1
white blood cells 320

xanthene dye 65
xanthone 60
xanthophyll cycle 514
xeroderma pigmentosum cells 263

yeast, photosensitization 561